

Please amend claim 30 as follows:

B²
30.(Amended) The packaging material of Claim 23, wherein the coating layer is discontinuous over the surface of the packaging material.

REMARKS

Reconsideration of the present application, as amended, is respectfully requested. Attached hereto is a marked-up version of the changes made to the specification and claims by the amendment. The attached appendix is captioned "Version with Markings to Show Changes Made."

A. STATUS OF THE CLAIMS

As a result of the present amendment, claims 23-31 and 34 remain in the case for continued prosecution.

B. AFFIRMATION OF ELECTION

Applicant hereby affirms the election previously made with traverse to prosecute the invention of group II. Applicant further notes that the unelected claims have been canceled and may be filed in a divisional application at a later date.

C. CLAIM OBJECTIONS

On page 4 of the office action, the Examiner has objected to claim 25 as being of improper dependent form and claim 30 due to a misspelling therein. In response, Applicant has amended claim 23 to include the broader range of coating layer as stated on page 4, line 29 of the specification. Due to this amendment, claim 25 is now properly dependent. Furthermore, claim 30 was amended to correct the typographical error.

D. THE INVENTION

The claimed invention pertains to packaging material having an anti-microbial coating layer. The anti-microbial coating layer is preferably printed on the surface of the packaging material and the coating layer has an exposed surface containing a polymer and zeolites containing anti-microbial metal ions. The zeolites have a particle size of between about 2 and about 5 microns, a pore size of between about 3 and about 5 Angstroms. The zeolites make up from about 0.5% to about 10% by weight of the coating layer.

E. REJECTIONS UNDER 35 U.S.C. 103(a)

On pages 5-8 of the office action, the Examiner has rejected claims 23-31 and 34 under 35 U.S.C. 103(a) as being unpatentable over Niira, et al. (U.S. Patent Nos. 4,938,958 and 5,556,699) in view of Quick, et al. (U.S. Patent No. 4,595,611) and Lindgren, et al. (U.S. Patent No. 5,603,997).

Applicants respectfully traverse the rejection of the Examiner and it is urged that a proper *prima facie* case of obviousness has not been made by the Examiner. A *prima facie* case of obviousness is established only when the teachings from the prior art itself would appear to have suggested the claimed subject matter to a person of ordinary skill in the art. The art must suggest how to apply its teachings to the specifically claimed invention.

As pointed out in the specification on pages 2 and 3 Niira, et al. (U.S. Patent Nos. 4,938,958 and 5,556,699) disclose "incorporating antibiotic zeolite s into the resin by means of kneading it with the zeolite or coating them on the surface of such a resin. No further description of coating is offered. No level of addition is offered. No suggestion of forming a coating solution to be applied to a packaging material is disclosed. There is also no description of how to coat and no instruction as to how to combine the formulations with packaging materials, such as clear plastic film, to render them anti-microbial. Such guidance is necessary to render the claims obvious since it has been pointed out by Applicant on page 2, first paragraph, that one of the key problems encountered in the past was that the majority of the antimicrobial agent was buried within the packaging materials. Thus, the amount of wasted antimicrobial is high. One of the problems mentioned with the '699 patent mentioned by Applicant in the background on page 3,

lines 25- *et seq.* states:

"Despite of this disclosure, further improvements in coating methods and in zeolite coating formulations have been sought. For example, in the past, it was known that the zeolites would rather quickly settle at the bottom of the vessel. Thus, the actual coating applied to the surface would often contain far less of the anti-microbial than desired. The effectiveness of the anti-microbial activity was also less than expected." (Emphasis added.)

In addition to the foregoing, Applicant further notes that there is absolutely no guidance concerning the zeolite pore size required by claim 1. Furthermore, the claims require the antimicrobial layer to be printed onto the packaging material. There is no disclosure or suggestion in the Niira references to undertake this step. Instead, these references only disclose incorporation of the hydrophobic zeolites into a film in the form of extrusion or laminations. Such techniques cause the very problems mentioned above, e.g. buried antimicrobials, wasted product, etc. Thus, the disclosure of U.S. Patent 5,556,699 and U.S. Patent 4,938,958 would be of little help in producing a package surface coating that provides high metal (such as silver) ion release as provided by the claimed invention. It cannot be said that the claimed invention is obvious in view of these references.

In addition, none of the secondary references relied upon by the Examiner cure the shortcomings of the primary references. For example, Quick, et al. (U.S. Patent No. 4,595,611) is mentioned by the Examiner as using sulfonated polyester binders. It is silent with regard to the use of antimicrobial zeolite coatings on the packaging which have been printed on so as to assure improved metal ion release nor the use of zeolites having the pore size, etc. required by the claims. Furthermore, Lindgren, et al. (U.S. Patent No. 5,603,997) involves the use of hydrophobic zeolites to reduce transfer from paper products. The zeolite types in this patent are based on pentasil type zeolite I, and act as scavenging products to reduce the formation of autoxidation products and reduce transfer of unwanted taste or odor. In short, they are completely contrary to the zeolites of the claimed invention. They do not release metal ions and therefore would not have the antimicrobial properties required by the claims.

Thus, even if the Examiner's suggestion to combine the references were adopted, it would still fail to render the claimed invention obvious. Thus, the present invention is not rendered obvious any of the references either taken alone or in any combination.

The Examiner has also stated that the prior art made of record and not relied upon is considered pertinent to Applicants' disclosure. Applicants have reviewed the references and it is urged that none of the references disclose or suggest the claimed invention.

In view of the above arguments and further in view of the amendments to the claims, it is respectfully submitted that Applicant has obviated the rejections under 35 U.S.C. § 103. It is also submitted that no prima facie case of obviousness has been established. Applicant has shown that the combination of references is not the invention and do not suggest the invention. Reconsideration and removal of the rejections is therefore proper and requested.

F. AUTHORIZATION TO CHARGE FEES

No fees are believed to be due. However, if it is determined that any fee is due or any overpayment has been made, the fee may be debited or credited to Deposit Account No. 02-2275.

G. CONCLUSION

In view of the actions taken and arguments presented, it is respectfully submitted that the present application is now in condition for allowance.

An early and favorable action on the merits is earnestly solicited.

Respectfully submitted,

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